



Contribution ID: 8

Type: **Contributed Talk**

Searches for Solar Neutrino in XENONnT experiment

Tuesday, September 30, 2025 6:20 PM (20 minutes)

The XENONnT experiment, a 5.9-tonne liquid xenon time projection chamber primarily designed for dark matter searches, recently achieved a significant milestone in neutrino physics with the first direct indication of nuclear recoils from solar ^8B neutrinos via coherent elastic neutrino-nucleus scattering (CE ν NS). This groundbreaking detection demonstrates XENONnT's unprecedented low-energy detection capabilities and ultra-low background environment, which motivates further solar neutrino searches. This presentation will provide updates on the ongoing search for solar pp neutrinos interacting through neutrino-electron elastic scattering, utilizing data from the first two science runs.

Neutrino Properties

Yes

Neutrino Telescopes & Multi-messenger

No

Neutrino Theory & Cosmology

No

Data Science and Detector R&D

Yes

Author: VOLTA, Giovanni (Max-Planck-Institut für Kernphysik)

Presenter: VOLTA, Giovanni (Max-Planck-Institut für Kernphysik)

Session Classification: Neutrino Physics

Track Classification: Neutrino Properties